

SimpleTech SmartMedia (SM) Card/Adapter User Guide

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Introduction

This is an Installation and User Guide for the SimpleTech® Smart Media (SM)Flash® Card (SSFDC) and the SmartMedia Flash® Adapter. The SimpleTech SmartMedia Flash Card is a super small form-factor card used in several devices including Digital Cameras, Personal Digital Assistants (PDA), MP3 music players, digital voice recorders, and other electronic devices such as cell phones, and pagers. The SmartMedia Flash Card is a solid-state, nonvolatile removable and reusable mass storage which shows up as an ATA hard drive to the host. However, compared to ATA/IDE/ESDI hard drives with rotating discs, the Solid State SmartMedia Flash Card is extremely rugged and very compact.

The SmartMedia Flash Adapter allows the SmartMedia Flash Card to plug into a PC Card socket. Therefore, the SmartMedia Flash Card with the SmartMedia® Adapter provides removable mass storage to thousands of hosts that have PC Card sockets, standard on many notebook computers.

The SimpleTech SmartMedia Flash Card is available in several capacities for your specific applications. The SimpleTech SmartMedia Flash Card Adapter is also available for using SmartMedia Flash Card in PC Card (PCMCIA) slots. Visit www.simpletech.com for details.

Installation Requirements

The following are the minimum requirements for using the SmartMedia Flash Card:

- A host (e.g., a computer or other devices such as digital camera, MP3 Audio Player/Recorder, PDA that uses SmartMedia Flash Cards as a storage device) with one of the following sockets:
 - A SmartMedia Flash card socket
 - A PC Card Type I or II (PCMCIA) socket when using the SmartMedia Flash with the SmartMedia Flash Adapter
- One of the following operating systems:
 - MS-DOS 5.0 or higher, Windows 3.x, and Card and Socket Services compatible with PCMCIA Release 2.1 or higher
 - Windows CE
 - Windows 95/98/98SE/ME/XP or 2000
 - Windows NT 3.5.1 /Win NT 4.0
 - OS/2 Warp!
 - Mac OS 8.6 or higher
 - Other hosts with firmware that support ATA data storage, and DOS file/FAT standards (e.g., digital camera, PDA, MP3, etc.)

Installing the SmartMedia Flash Card

Caution: There is no industry standard as to how a SmartMedia Card should be inserted in the Adapter or SmartMedia Card Reader. Hence, if you insert the SmartMedia card in the wrong orientation, your computer will not recognize the SmartMedia Card. After following the instructions listed below, if your card does not show up, turn the card upside down and reinsert the card.



Insert with Gold Contacts Facing Up

**If the Card is NOT
Recognized by
Your System,
Turn the Card
Upside Down
and Reinsert
the Card**



Insert with Gold Contacts Facing Down

A. Digital Cameras/MP3 Players/Digital Camcorders/Printers

Attach the SmartMedia Flash Card to the Digital Cameras/MP3 Players/Digital Camcorders/Printers as follows:

1. Please refer to your System Manual for proper orientation of the SimpleTech SmartMedia Flash Card in your system. Please note that if the SmartMedia card is improperly inserted, the system will not recognize the card.
2. Formatting the SmartMedia card in your system:
All SimpleTech SmartMedia cards are factory-formatted in DOS/Windows Operating Systems. Most devices do not require additional drivers to support SmartMedia Flash Card. If your device does not recognize the SmartMedia Flash Card when inserted, you would need to format the SmartMedia Flash card in the devices. Please refer to the User Guide of your device for basic formatting instructions of the SmartMedia Flash card.

B. PC Computers /PDA (Handheld Device, Palmtop)

If you are planning to use the SmartMedia card in the PC Card slot of your PDA/Computer, you would need to insert the SmartMedia card in the PC Card adapter. Please refer to **Attaching the SmartMedia Flash Card to the SmartMedia Adapter** section.

If you are planning to access the SmartMedia card through USB or Parallel port SmartMedia card reader, please refer to the following section titled **Attaching the SmartMedia Flash Card to USB SmartMedia Flash Reader**.

1) Attaching the SmartMedia Flash Card to the SmartMedia Adapter (If Applicable)

Attach the SmartMedia Flash Card to the SmartMedia Adapter as follows:

1. Orient the SimpleTech logos on both the SmartMedia Flash Card and the SmartMedia Adapter facing upwards.
2. With the “**Insert**” arrow on top of the SmartMedia Flash Card pointing towards the SmartMedia Adapter, place the SmartMedia Flash Card onto the rails of the SmartMedia Adapter (see *Figure below*).
3. Slide the SmartMedia Flash Card all the way into the SmartMedia Adapter until the connector on the SmartMedia Flash Card fully docks with the connector on the SmartMedia Adapter.



If the SmartMedia Flash Card doesn't appear to seat properly, try turning the SmartMedia Flash Card over upside down. Do not force the SmartMedia Flash Card into the socket under any circumstances.

After inserting the Smart Media card in the adapter, plug the Adapter in the PC Card socket in your computer.

2) Attaching the SmartMedia Flash Card to USB SmartMedia Flash Card Reader (If Applicable)

Important Note: Users are highly recommended to complete the device driver installation procedure for the USB Reader, prior to connecting the USB card Reader. Make sure USB Flash Card Reader drivers are installed on your system.

1. Turn on your PC and wait for the Windows desktop to appear.
2. Close all applications.
3. Insert the SmartMedia Card in the card reader slot with the proper orientation as specified by the card reader.

Using SmartMedia Card in Notebook/Desktop Computers:

Windows 95/98/98SE/ME/ 2000/XP

Proceed as follows:

1. Start the Windows Operating System and wait for the system to completely boot.
 2. Plug the SmartMedia Flash Card (with the adapter, if applicable) into the socket.
 3. The computer will respond with a beep and the PC card icon will appear on the right corner of the task bar.
OR,
Windows may respond with dialog boxes. If the “**New Hardware Found**” window appears, select “**Windows default driver**,” then click on “**OK**.”
 4. Follow the on-screen prompts.
- The SmartMedia Flash Card will be automatically recognized. Double click on "My Computer" icon on your system desktop. The SmartMedia Flash Card shows up as a removable hard drive, e.g., "Drive D:".

Windows NT 3.5.1/ Win NT 4.0

Windows NT 3.5.1/ 4.0 does not support Plug n' Play. You must plug the SmartMedia Flash Card into the socket before starting Windows NT 3.5.1/ 4.0.

1. Before starting Windows NT 3.5.1/ 4.0, plug the SmartMedia Flash Card into the socket.
2. While booting, Disable PnP (Plug-n-Play) by switching to Off in the BIOS Settings.
3. An additional software such Card Wizard Pro from System Soft may be required for Win NT to recognize the device.
4. The computer will respond with a beep and the PC card icon will appear on the right corner of the task bar.
OR,
Windows may respond with dialog boxes. If the “**New Hardware Found**” window appears, select “**Windows default driver**,” then click on “**OK**.”
5. Follow the on-screen prompts.

The SmartMedia Flash Card will be automatically recognized. Double click on "My Computer" icon on your system desktop. The SmartMedia Flash Card shows up as a removable hard drive, e.g., “Drive D:” .

Windows 3.x with Card and Socket Services Release 2.1 or Higher

Proceed as follows:

1. Start Windows 3.x.
2. Plug the SmartMedia Flash Card into the socket. The computer may beep, when the computer recognizes the SmartMedia Flash Card.

Mac OS

Proceed as follows:

1. Start Mac OS.
2. Plug the SmartMedia Flash Card into the socket.
3. The SmartMedia Flash Card is mounted on the desktop and will show up as a volume (i.e. drive icon) on Macintosh computers.

Other Hosts or Operating Systems

Refer to the User guides provided with the host or operating system for instructions on plugging the SmartMedia Flash Card into the socket.

Inserting or Removing SmartMedia Flash Card

Refer to the section appropriate to your operating system.

Inserting or Removing the SmartMedia Flash Card with Windows 98/98SE/ME/2000/XP

You can insert the SmartMedia Flash Card at anytime. When you wish to remove the SmartMedia Flash Card, make sure you are not accessing any data in the card. It is recommended that you “stop” the SmartMedia Flash Card before removing the SmartMedia Flash Card as follows:

1. Double-click on the **PCMCIA icon** located on the right corner of the **task bar** or click on **Start - Settings - Control Panel - PC Card (PCMCIA) icon**. The “**PC Card Properties**” window appears. Select the SmartMedia Flash Card from the list. Click on the “**Stop**” button. When prompted to remove the SmartMedia Flash Card, proceed to next step to eject the card.
2. If your computer has an eject button on the socket, press the button to release the SmartMedia Flash Card. Then, pull the SmartMedia Flash Card from the socket OR,
If your computer does not have an eject button on the socket, carefully pull the SmartMedia Flash Card straight out from the socket.

Proceed to *Protecting the SmartMedia Flash Card*.

Inserting or Removing the SmartMedia Flash Card with Windows NT 3.5.1/ Win NT 4.0

Windows NT 3.5.1/ 4.0 does not support Plug n' Play. You must plug the SmartMedia Flash Card into the socket before starting Windows NT 3.5.1/ 4.0.

You must insert the SmartMedia Flash Card before booting into Windows NT 3.5.1/ 4.0.

To remove the SmartMedia Flash Card, you must first exit Windows NT 3.5.1/ 4.0, then proceed as follows:

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- If your computer has an eject button on the socket, press the button to release the SmartMedia Flash Card. Then, pull the SmartMedia Flash Card from the socket, OR
- If your computer does not have an eject button on the socket, carefully pull the SmartMedia Flash Card straight out from the socket.

Inserting or Removing the SmartMedia Flash Card with Windows 3.x and OS/2 Warp

You can insert the SmartMedia Flash Card anytime. You can remove the SmartMedia Flash Card anytime the computer is not accessing the SmartMedia Flash Card. Some computers will beep when the computer recognizes the change in status of the socket. To remove the SmartMedia Flash Card, proceed as follows:

- If your computer has an eject button on the socket, press the button to release the SmartMedia Flash Card. Then, pull the SmartMedia Flash Card from the socket, OR
- If your computer does not have an eject button on the socket, carefully pull the SmartMedia Flash Card straight out from the socket.

Inserting or Removing the SmartMedia Flash Card with Mac OS

You can insert the SmartMedia Flash Card at anytime. When you wish to remove the SmartMedia Flash Card, drag the SmartMedia Flash Card Drive icon into the trash bin. The SmartMedia Flash Card is ejected from the computer in most cases. Otherwise, carefully remove the card from the socket.

Formatting the SmartMedia Card

All SimpleTech SmartMedia cards are factory-formatted in DOS/Windows Operating Systems. Most devices do not require additional drivers to support SmartMedia Flash Card. If your device does not recognize the SmartMedia Flash Card when inserted, you would need to format the SmartMedia Flash card in the device itself. Please refer to the User Guide of your device for basic formatting instructions of the SmartMedia Flash card in the device.

If you wish to format the card in the computer, please refer to the following instructions.

Formatting the SmartMedia Card in Windows Operating Systems

Insert the card in the adapter or the card reader and Right click on the drive letter for the card in windows explorer. Choose "format" among the options and proceed with the on-screen instructions.

Caution: Please note that the formatting the card will erase all the data in the card. Hence, be careful while formatting the card. Also, make sure to choose the correct drive letter for the card while formatting. Otherwise, you might accidentally erase all the data in some other drive.

Formatting the SmartMedia Card in Mac Operating Systems

Insert the card in the adapter or the card reader and highlight the icon for the card on the desktop. Click on "Special" and choose "Erase Disk" and proceed with on-screen instructions.

Caution: Please note that the formatting the card will erase all the data in the card. Hence, be careful while formatting the card. Also, make sure to choose the correct icon for the card while formatting. Otherwise, you might accidentally erase all the data in some other drive.

SmartMedia Flash Card Precaution and Protection

Always carefully observe the following precautions:

- Never remove the SmartMedia Flash Card when the computer is accessing the SmartMedia Flash Card.
- Do not turn off the device while accessing the SmartMedia Flash Card.
- Do not touch the gold leads on the card.
- Keep the SmartMedia Flash Card away from electrostatic sources or magnetic fields.
- Do not bend, drop or impact the SmartMedia Flash Card.
- Keep the card away from heat, water, moisture, and direct sunlight.
- Please be noted that as a security measure, postal department might subject all articles sent through mail to high level radiation. High level radiation erases all data in the SmartMedia Flash Card and renders the card useless. Hence please check and verify postal service policies before sending the cards in the mail.

SmartMedia Card (SSFDC) Specifications

ORDERING INFORMATION (SimpleTech SmartMedia Flash Part Numbers)

SmartMedia Card P/N

	Capacity
• STI-SM3/128	128 MBytes
• STI-SM3/64.....	64 MBytes
• STI-SM3/32.....	32 MBytes
• STI-SM3/16.....	16 MBytes
• STI-SM3/8.....	8 MBytes

SmartMedia Adapter P/N

• STI-SMAD	SmartMedia Card to Type II PC Card
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Physical Dimensions (SmartMedia Flash Card without SmartMedia Adapter)

Length	45.0 mm
Width	37.0 mm
Thickness	0.76 mm
Weight	1.8 gms

Performance

Interface	SSFDC
Read Cycle Time	
Random Access	10 µs (Max.)
Serial Page Access	80 ns (Min.)
Write Cycle Time	
Program Time	200 µs (Typ.)
Block Erase Time	2 ms (Typ.)

Power Requirements

All values quoted are typical at ambient temperature and nominal supply voltage unless otherwise stated.

DC Input Voltage Range	2.7V - 3.6V
Typical Power Dissipation	
Sleep Current	20 µA
Sequential Read	10 mA
Program.....	10 mA
Erase	10 mA

Environmental Specifications

Temperature Range	
Operating	-0°C to +55°C
Storage	-20°C to +65°C

Reliability

Endurance	100,000 Program/Erase Cycles
Data Retention	10 Years

ADAPTER SPECIFICATIONS

Reliability

Endurance	10,000 Insert/Extract
MTBF (Mean Time Between Failure)	250,000 POH

Power

Voltage	3.3V ± 5%
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Environmental

Operating Temperature	0°C to 60°C
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Troubleshooting

Please note that there is no industry standard for orienting SmartMedia cards in the Card Slot. Some readers require the card to be inserted with the side having the gold contacts facing upwards while others may require the card to be inserted with the side having gold contacts face downwards. If the card is not detected by your system when you

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insert the SmartMedia card, remove the card, turn it upside down and reinsert the card. In windows OS, the card will show up as a drive letter under "My Computer". In Apple OS, the card will show up as an icon.

Technical Support

If you experience any difficulties with the installation of the SmartMedia Flash Card or SmartMedia Flash Adapter, visit our web site www.simpletech.com. If you are still unable to resolve the problems, contact SimpleTech Technical Support at the following:

- Tel: 949-476-1180 or
1-800-367-7330 (USA & Canada only)
- Fax: 949-476-1209
- EMail: Fill the on-line Support Request Form at <http://www.simpletech.com>

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